
GCSE FOOD PREPARATION AND NUTRITION 8585/W

Paper 1 Food Preparation and Nutrition

Mark scheme

June 2023

Version: 1.1 Final



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly Level 3 with a small amount of Level 4 material it would be placed in Level 3 but be awarded a mark near the top of the level because of the Level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A			
Question	Answer Key	Assessment Objective	Total marks
01.1	D – Yellow	AO1	1
01.2	A – baking.	AO1	1
01.3	B – vitamin C.	AO1	1
01.4	D – strengthen teeth and bones.	AO1	1
01.5	A – cardiovascular disease.	AO1	1
01.6	C – 75 °C.	AO1	1
01.7	A – coagulation.	AO1	1
01.8	C – Food, moisture, time and warmth	AO1	1
01.9	C – Potato	AO1	1
01.10	C – Soft cheese	AO1	1
01.11	A – canned soup.	AO1	1
01.12	C – 35%.	AO1	1
01.13	C – the amount of energy the body needs to stay alive.	AO1	1
01.14	C – a solid.	AO1	1
01.15	B – high in protein and high in moisture.	AO1	1
01.16	C – Folding	AO1	1
01.17	A – constipation.	AO1	1
01.18	C – make blood clot.	AO1	1

01.19	B – a foundation to support producers in developing countries.	AO1	1
01.20	A – Bread	AO1	1

Section B			
Qu	Part	Marking guidance	Total marks
02	1	Give four reasons why someone might follow a vegetarian or vegan diet. Marking guidance Award 1 mark per valid point. This question is assessed against AO1(b). <u>Indicative content</u> • Personal reasons, eg someone may not like the taste and/or texture of meat/fish/animal products. • Health reasons, eg to reduce fat content in diet, to reduce risk of diet-related health conditions, to lose weight, etc. Do not credit reference to slimming. • May have an allergy or intolerance to meat or animal produce, eg lactose intolerance. • Social reasons, eg someone may be influenced by the dietary choices of friends/family. • External influences, eg someone may be influenced by a media campaign/celebrity, etc. • Media influences, eg more advertising of vegetarian/vegan foods on TV/social media, etc. • To try something new, eg Veganuary. • Vegetarian/vegan foods may be healthier, eg lower in fat. • Moral and ethical reasons, eg animal welfare concerns. • Environmental concerns, eg help reduce global warming, lower carbon footprint, etc. • Vegetarian/vegan foods may be more sustainable, eg less land is needed to grow crops compared to meat and dairy farming. • Following a vegetarian/vegan diet may add more variety to someone's diet. • Religious beliefs, eg many Hindus and Buddhists will follow a vegetarian or vegan diet. • Economic reasons, eg meat and animal products can be more expensive than plant-based alternatives. • People travel to a greater range of countries where more vegetarian/vegan food is available. • Greater variety of plant-based products available in shops, supermarkets and restaurants. • New trends. • Protein alternatives can have a longer shelf life, reducing food waste. Any other relevant and correct response can be credited.	4

Qu	Part	Marking guidance	Total marks								
02	2	Explain how the ingredients can be changed so that the lasagne is suitable for someone following a vegan diet. Marking guidance This question is assessed against AO2. Brand names can be credited. <table><tr><td>Responses show very good knowledge and understanding of how the lasagne ingredients can be changed for a vegan diet. Most ingredients are correctly identified.</td><td>5–6 Marks</td></tr><tr><td>Responses show good knowledge and understanding of how the lasagne ingredients can be changed for a vegan diet. Some ingredients are correctly identified.</td><td>3–4 Marks</td></tr><tr><td>Responses show basic knowledge and understanding of how the lasagne ingredients can be changed for a vegan diet. The identification of ingredients and changes is limited.</td><td>1–2 Marks</td></tr><tr><td>No answer worthy of credit</td><td>0 Marks</td></tr></table> <u>Indicative content</u> • Beef mince could be substituted for textured vegetable protein/mycoprotein/vegan mince/meat alternative/tofu/seitan/lentils/beans/pulses, etc to remove the animal protein/maintain a source of protein. Accept Quorn mince. • Beef mince could be substituted for vegetables so that the filling is plant-based. • Beef stock cube could be changed for a vegetable stock cube so that there is no beef extract, which would be an animal product. • Plant-based milk (soya/oat/rice/almond, etc) should be used instead of cow’s milk so that it is not from an animal source. • Plant-based spread/oil should be used instead of butter, eg sunflower spread/sunflower oil, because butter is made from cow’s milk. Accept margarine. • Cheddar cheese could be substituted for a vegan cheese alternative so that it adds flavour but is plant-based. Cheddar cheese is made from cow’s milk. • Nutritional yeast could be added to the sauce to achieve a cheese flavour. • Ready-made vegan bechamel sauce could be used to ensure that it does not contain any animal products.	Responses show very good knowledge and understanding of how the lasagne ingredients can be changed for a vegan diet. Most ingredients are correctly identified.	5–6 Marks	Responses show good knowledge and understanding of how the lasagne ingredients can be changed for a vegan diet. Some ingredients are correctly identified.	3–4 Marks	Responses show basic knowledge and understanding of how the lasagne ingredients can be changed for a vegan diet. The identification of ingredients and changes is limited.	1–2 Marks	No answer worthy of credit	0 Marks	6
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		• Lasagne sheets should be checked to ensure they are not made with eggs because vegans cannot eat eggs as they are an animal product. • Lasagne sheets could be substituted for sliced vegetables, eg butternut squash, to reduce the risk of them containing eggs, which vegans cannot eat because they are an animal product. Any other relevant and correct response can be credited.	
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Qu	Part	Marking guidance	Total marks						
02	3	Explain how to improve the three sensory qualities of the vegetable stir fry. Do not repeat your answers. Marking guidance This question is assessed against AO2. Award 1 mark per valid point or 2 marks for each point that is clearly explained. Only two marks can be awarded per sensory quality. Answers should not be repeated. <u>Indicative content</u> <table><tr><td>Colour</td><td> • A wider variety of vegetables could be added for colour contrasts, eg onion, pepper, etc. • Vegetables could be stir-fried for longer/cooked on a higher heat so they are slightly charred/golden/caramelised. • A stir fry/dipping sauce could be added to improve the colour and flavour of the dish, eg sweet chilli, soy, hoisin, etc. • Add herbs, eg coriander, for colour contrast. • Add coloured noodles for colour contrast, eg spinach/beetroot noodles. </td></tr><tr><td>Flavour</td><td> • If a source of protein is added, it could be marinated before cooking to add flavour. • Herbs/spices could be added to the dish to improve flavour, eg chilli. • Extra seasoning could be added, eg salt and pepper, as salt is a flavour enhancer. </td></tr><tr><td>Texture</td><td> • A source of protein could be added to improve the texture, eg chicken, beef, pork, prawns, tofu, etc. • The stir fry could be cooked for less time to retain the texture of the vegetables/more time to make the vegetables softer. • A wider variety of vegetables could be added for texture contrasts, eg julienne carrots, water chestnuts, etc. • A sauce could be used to add moisture/prevent the stir fry from being dry. • Rice/noodles could be added to add contrasting textures. </td></tr></table> Any other relevant and correct response can be credited.	Colour	• A wider variety of vegetables could be added for colour contrasts, eg onion, pepper, etc. • Vegetables could be stir-fried for longer/cooked on a higher heat so they are slightly charred/golden/caramelised. • A stir fry/dipping sauce could be added to improve the colour and flavour of the dish, eg sweet chilli, soy, hoisin, etc. • Add herbs, eg coriander, for colour contrast. • Add coloured noodles for colour contrast, eg spinach/beetroot noodles.	Flavour	• If a source of protein is added, it could be marinated before cooking to add flavour. • Herbs/spices could be added to the dish to improve flavour, eg chilli. • Extra seasoning could be added, eg salt and pepper, as salt is a flavour enhancer.	Texture	• A source of protein could be added to improve the texture, eg chicken, beef, pork, prawns, tofu, etc. • The stir fry could be cooked for less time to retain the texture of the vegetables/more time to make the vegetables softer. • A wider variety of vegetables could be added for texture contrasts, eg julienne carrots, water chestnuts, etc. • A sauce could be used to add moisture/prevent the stir fry from being dry. • Rice/noodles could be added to add contrasting textures.	6
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Qu	Part	Marking guidance	Total marks
02	4	Give four controlled conditions for carrying out sensory testing. Marking guidance Award 1 mark per valid point. This question is assessed against AO1(a). Do not credit reference to samples being served on the same coloured plate as this is provided as an example on the exam paper. Do not credit reference to room decoration as this is not relevant to the question. Do not credit reference to ingredients/freshness/seasoning/cooking/presentation. <u>Indicative content</u> • It should take place in a quiet area so tasters are not distracted. • Food tasters should be given plain crackers or water to cleanse their palate between samples. Do not credit reference to flavoured drinks, eg lime/lemon juice. • Food tasters should work on their own so they are not influenced by others. • Small samples should be given so that the taster does not get full up. • Samples should be served at the same temperature for fair testing. • Lighting should be controlled so all samples look the same, eg red lighting. • Food samples should be identified using random codes so that tasting is blind/a blindfold could be used. • A number of tasters should be involved so realistic data is collected. • The test should be carried out in hygienic conditions to avoid the food being contaminated by microorganisms. Credit reference to clean plates/cutlery. • Tasters should be provided with charts to complete so that data is collected accurately. • The same amount of each sample should be served for fair testing. Credit reference to same size plates. However, if reference is made to both sample size and plate size, this should only be credited once. • Tasting should take place away from where the food was prepared so aromas do not influence the taster. • Tasters should be given clear instructions. Any other relevant and correct response can be credited.	4

Qu	Part	Marking guidance	Total marks														
03	1	Explain what happens at each stage of the cheese making process. One stage has been completed. Marking guidance Award 1 mark per valid point. This question is assessed against AO2. <u>Indicative content</u> <table><tr><th>Stage</th><th>Explain what happens</th></tr><tr><td>Milk is pasteurised.</td><td> • Pasteurisation is the heating of the milk to 72 °C for 15 seconds. • Pasteurisation kills bacteria in the milk. • Do not accept germs. </td></tr><tr><td>Bacteria culture is added to the milk.</td><td> • The bacteria culture turns the lactose sugar into lactic acid. • The lactic acid coagulates the protein in the milk. • The bacteria culture adds flavour and texture to the cheese. • The bacteria culture helps to preserve the cheese. </td></tr><tr><td>An enzyme called rennet is added to the milk.</td><td> • Rennet coagulates the protein. • Rennet turns the milk into a curd (semi-solid) and whey (liquid). • Rennet speeds up the process of turning milk into curds and whey. </td></tr><tr><td>Curds are cut up. The curd is dried and stacked.</td><td> • Cutting the curds releases the whey. • Stacking the curds helps more whey drain off/removes moisture. • The curd is turned to dry it. • Do not accept reference to ‘cheddaring’ without explanation of what is happening at this stage. </td></tr><tr><td>Curds are heated and cut into smaller pieces.</td><td>This helps form the final texture of the cheese.</td></tr><tr><td>Salt is added and curds are pressed into cheese moulds.</td><td> • Salt adds flavour. • Salt helps to preserve the cheese/restricts growth of bacteria. • Salt regulates/reduces moisture content. </td></tr></table>	Stage	Explain what happens	Milk is pasteurised.	• Pasteurisation is the heating of the milk to 72 °C for 15 seconds. • Pasteurisation kills bacteria in the milk. • Do not accept germs.	Bacteria culture is added to the milk.	• The bacteria culture turns the lactose sugar into lactic acid. • The lactic acid coagulates the protein in the milk. • The bacteria culture adds flavour and texture to the cheese. • The bacteria culture helps to preserve the cheese.	An enzyme called rennet is added to the milk.	• Rennet coagulates the protein. • Rennet turns the milk into a curd (semi-solid) and whey (liquid). • Rennet speeds up the process of turning milk into curds and whey.	Curds are cut up. The curd is dried and stacked.	• Cutting the curds releases the whey. • Stacking the curds helps more whey drain off/removes moisture. • The curd is turned to dry it. • Do not accept reference to ‘cheddaring’ without explanation of what is happening at this stage.	Curds are heated and cut into smaller pieces.	This helps form the final texture of the cheese.	Salt is added and curds are pressed into cheese moulds.	• Salt adds flavour. • Salt helps to preserve the cheese/restricts growth of bacteria. • Salt regulates/reduces moisture content.	6
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Any other relevant and correct response can be credited.							

Qu	Part	Marking guidance	Total marks
03	2	Microorganisms can be added to cheese, eg blue cheese. Explain why moulds are used in cheese production. Marking guidance Award 1 mark per valid point. This question is assessed against AO2. <u>Indicative content</u> - Mould spores can enhance the flavour of cheese. - Mould spores can alter the appearance/add colour to cheese. - Mould spores can alter the texture of cheese. - Mould spore can enhance the aroma of cheese. - Blue cheeses use mould spores to give them a distinctive flavour and blue vein pattern. - Using moulds allows a wider variety of cheese. - Stilton, Gorgonzola and Danish Blue are examples of blue cheeses. - Non-pathogenic moulds can also be used to ripen/mature cheeses and add flavour. - Mould spores can be used to create a protective rind/to add flavour/texture eg Brie and Camembert. Any other relevant and correct response can be credited. NB: Moulds do not extend the shelf-life of cheese.	4

Qu	Part	Marking guidance	Total marks						
03	3	Use this information and your knowledge of healthy eating guidelines and nutrition to: • analyse the suitability of this food diary for an overweight adult • evaluate how the adult’s diet could be improved to meet their nutritional needs. Marking guidance This question is assessed against AO4(a) and AO4(b). <table><tr><td>Responses include very good knowledge and understanding related to the suitability of the food plan for an overweight adult. There are very good explanations and justifications of how the diet could be improved to meet the adult’s nutritional needs. There is a very good balance between analysis and evaluation. Analysis of the food diary is very good and refers to a wide range of points related to the food diary and healthy eating guidelines. Evaluation makes very good judgements and conclusions related to the changes required to improve the adult’s diet. A wide range of justified and accurate improvements, related to current healthy eating guidelines are made, which are closely linked to the food diary analysis.</td><td>9–12 Marks</td></tr><tr><td>Responses include good knowledge and understanding related to the suitability of the food plan for an overweight adult. There are good explanations and justifications of how the diet could be improved to meet the adult’s nutritional needs. There is a good balance between analysis and evaluation. Analysis of the food diary is good and refers to a range of points relating to the food diary and healthy eating guidelines. Evaluation makes good judgements and conclusions related to the changes required to improve the adult’s diet. A range of justified and improvements, related to current healthy eating guidelines are made, which are closely linked to the food diary analysis.</td><td>5–8 Marks</td></tr><tr><td>Responses include basic knowledge and understanding related to the suitability of the food plan for an overweight adult. There are some explanations of how the diet could be improved to meet the adult’s nutritional needs. There is an imbalance between analysis and evaluation. Analysis of the food diary is basic and may refer to healthy eating guidelines.</td><td>1–4 Marks</td></tr></table>	Responses include very good knowledge and understanding related to the suitability of the food plan for an overweight adult. There are very good explanations and justifications of how the diet could be improved to meet the adult’s nutritional needs. There is a very good balance between analysis and evaluation. Analysis of the food diary is very good and refers to a wide range of points related to the food diary and healthy eating guidelines. Evaluation makes very good judgements and conclusions related to the changes required to improve the adult’s diet. A wide range of justified and accurate improvements, related to current healthy eating guidelines are made, which are closely linked to the food diary analysis.	9–12 Marks	Responses include good knowledge and understanding related to the suitability of the food plan for an overweight adult. There are good explanations and justifications of how the diet could be improved to meet the adult’s nutritional needs. There is a good balance between analysis and evaluation. Analysis of the food diary is good and refers to a range of points relating to the food diary and healthy eating guidelines. Evaluation makes good judgements and conclusions related to the changes required to improve the adult’s diet. A range of justified and improvements, related to current healthy eating guidelines are made, which are closely linked to the food diary analysis.	5–8 Marks	Responses include basic knowledge and understanding related to the suitability of the food plan for an overweight adult. There are some explanations of how the diet could be improved to meet the adult’s nutritional needs. There is an imbalance between analysis and evaluation. Analysis of the food diary is basic and may refer to healthy eating guidelines.	1–4 Marks	12
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Evaluation makes basic judgements and conclusions related to the changes required to improve the adult's diet. There may be some improvements suggested, related to current healthy eating guidelines.	
No answer worthy of credit	0 Marks

Indicative content

Analyse the suitability of this food diary for an overweight adult.

Negative aspects – Why the food diary is unsuitable

- The meal plan is not healthy or nutritionally balanced and does not meet the nutritional needs of an adult.
- The foods eaten do not meet the Eatwell Guide recommendations/NHS 8 Tips for Health Eating.
- The food diary lacks the correct portions of fresh fruit and vegetables and does not include 5-a-day.
- Fruit juice is consumed; however, it may exceed the recommended 150 ml.
- Lack of iron which can lead to iron deficiency anaemia.
- High in energy from both fat and carbohydrate sources which can lead to weight gain if not burned off as energy.
- It is too high in saturated fat, which can lead to weight gain and obesity. Excess fat consumption could cause heart disease, hypertension and type 2 diabetes in later life.
- It is too high in sugar, which can lead to tooth decay, weight gain, obesity, type 2 diabetes and cardiovascular disease in later life.
- It is too high in salt, which can cause excessive thirst, kidney problems and hypertension/high blood pressure.
- There is a lack of dietary fibre/NSP from both wholegrain sources and fruit and vegetable sources, which can cause constipation.
- It is too high in calories and processed carbohydrates, which can lead to obesity.
- Sources of protein are high in fat, particularly saturated fat.
- The adult's physical activity level (PAL) may be too low for this food diary, which contains several energy dense foods.
- The amount of energy from each macronutrient exceeds the recommended percentage – 50% carbohydrate, 35% fat and 15% protein.
- The food diary is full of highly processed foods which are not natural and often contain lots of additives, colourings, flavourings and preservatives.
- Daily intake of food could be over the recommended 2000–2500 kJ per day.
- 3 drinks per day is insufficient and Eatwell Guide suggests 6–8 glasses of water per day.

		<u>Positive aspects – Why the food diary is suitable</u> • Protein – bread, sausage, tuna, peanuts, cheese and tomato pizza – for growth and repair of cells and use as secondary source of energy. • Vitamins – B group vitamins in white bread, vitamins A and D in the butter, vitamin C in fruit juice. • Minerals – iron in white bread. Calcium in white bread and cheese. • Essential fatty acids – omega 3 from the tuna. • The adult's physical activity level (PAL) may be high, therefore the foods, many of which are energy dense, would be suitable. Evaluate how the adult's diet could be improved to meet their nutritional needs. • Follow the guidance of the Eatwell Guide to achieve a well-balanced diet. • Increase the number of fruit and vegetables to achieve 5-a-day. For example, at lunch, the brownie could be substituted for a portion of fruit or vegetables such as apples, satsumas, bananas, grapes, carrot sticks, etc. At evening meal, toppings could be added to the pizza, and it could be served with salad rather than chips. • Increase the dietary fibre by using wholemeal, granary or brown bread to aid digestion and absorption of nutrients and prevent constipation. Dried fruits, such as raisins or sultanas, could also be eaten as a snack. • Drink water or low sugar drinks rather than coffee/fruit juice/fizzy drinks to reduce sugar consumption. • Drink more water to stay hydrated. • Have a lower salt alternative to the crisps and salted peanuts such as plain rice cakes, plain oat cakes, lower salt crispbreads, etc. • Reduce fat content by using low fat alternatives eg mayonnaise and sausages. • Eat food and/or drink that is high in fat and sugar less often and in small amounts. • The brownie for lunch could be substituted for fruit salad, yoghurt or fromage frais. • Include foods from the dairy and alternatives group such as milk, soya drinks, fromage frais and yoghurts to provide calcium for bone health. • Make sure the energy content matches the adult's physical activity level. • Be more active, eg through regular exercise. • Avoid foods/be mindful of foods with hidden fat/sugar/salt. Any other relevant and correct response can be credited.	
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Qu	Part	Marking guidance	Total marks										
04	1	Explain the term seasonal foods. You should support your answer with examples from different seasons. Marking guidance Award 1 mark for definition and 2 marks for relevant examples from different seasons. The appropriate season must be stated for each example. This question is assessed against AO1(b). Credit reference to specific months of the year rather than seasons, where accurate. Do not credit reference to any religious festivals, eg Christmas. <u>Indicative content</u> Seasonality is when a particular food is ripe/ready to harvest/ready to eat at a particular time of year/in a particular season. Examples may include: <table><tr><th>Season</th><th>Foods in Season</th></tr><tr><td>Spring</td><td> - Asparagus, rhubarb, broccoli, radishes, spinach, spring onions, peas, lettuce, lamb. </td></tr><tr><td>Summer</td><td> - Blueberries, cherries, strawberries, peaches, apricots, aubergine, broad beans, runner beans, courgettes, tomatoes, nectarines, game. </td></tr><tr><td>Autumn</td><td> - Butternut squash, pepper, pumpkin, sweetcorn, grapes, pears, plums, blackberries, cranberries, apples. </td></tr><tr><td>Winter</td><td> - Brussel sprouts, turnips, parsnips, kale, swede, cauliflower, chestnuts. </td></tr></table> Any other relevant and correct response can be credited.	Season	Foods in Season	Spring	Asparagus, rhubarb, broccoli, radishes, spinach, spring onions, peas, lettuce, lamb.	Summer	Blueberries, cherries, strawberries, peaches, apricots, aubergine, broad beans, runner beans, courgettes, tomatoes, nectarines, game.	Autumn	Butternut squash, pepper, pumpkin, sweetcorn, grapes, pears, plums, blackberries, cranberries, apples.	Winter	Brussel sprouts, turnips, parsnips, kale, swede, cauliflower, chestnuts.	3
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Qu	Part	Marking guidance	Total marks
04	2	Identify three advantages of buying seasonal foods. Do not repeat your answers. Marking guidance Award 1 mark per valid point. This question is assessed against AO1(a). Answers should not be repeated. Candidates should only be credited with one mark when referencing sensory features. Do not credit 'higher/better quality' unless candidates have validated the point by referencing sensory features. <u>Indicative content</u> • The flavour, colour and texture of food is at its best when in season. • More availability/easier to find when food is in season. • Using seasonal foods can reduce food miles/carbon emissions/is better for the environment. • Food is fresher when it is in season. • Seasonal foods can be cheaper. • Eating seasonal foods adds variety to your diet throughout the year. • Considered healthier and more nutritious due to fewer vitamins being lost during storage and transportation. • Seasonal ingredients are often grown in large quantities eg strawberries, tomatoes and then preserved as chutneys, jams or pickles or frozen for later use. • Can buy locally/supports local farmers. • Gives local employment which is good for local economy. Any other relevant and correct response can be credited.	3

Qu	Part	Marking guidance	Total marks								
04	3	Consumers in the UK waste large amounts of food and food packaging every year. Analyse how consumers can reduce their food and packaging waste. Evaluate the impact of reducing food and packaging waste on the environment. Marking guidance This question is assessed against AO4(a) and AO4(b). <table><tr><td>Responses include very good knowledge and understanding related to food and packaging waste. There is a very good balance between analysis and evaluation. Analysis of how consumers can reduce food and packaging waste is very good and refers to a wide range of points from the indicative content. Evaluation makes very good judgements and conclusions about the impact that reducing food and packaging waste will have on the environment. A wide range of justified and accurate points are made.</td><td>7–8 Marks</td></tr><tr><td>Responses include good knowledge and understanding related to food and packaging waste. There is a good balance between analysis and evaluation. Analysis of how consumers can reduce food and packaging waste is good and refers to a range of points from the indicative content. Evaluation makes good judgements and conclusions about the impact that reducing food and packaging waste will have on the environment. A range of justified and accurate points are made.</td><td>5–6 Marks</td></tr><tr><td>Responses include basic knowledge and understanding related to food and packaging waste. There is an imbalance between analysis and evaluation. Analysis of how consumers can reduce food and packaging waste is basic, with some points made. Evaluation makes basic judgements and conclusions about the impact that reducing food and packaging waste will have on the environment. Some points are made.</td><td>3–4 Marks</td></tr><tr><td>Responses include limited knowledge and understanding related to food and packaging waste. There may only be analysis or evaluation points presented.</td><td>1–2 Marks</td></tr></table>	Responses include very good knowledge and understanding related to food and packaging waste. There is a very good balance between analysis and evaluation. Analysis of how consumers can reduce food and packaging waste is very good and refers to a wide range of points from the indicative content. Evaluation makes very good judgements and conclusions about the impact that reducing food and packaging waste will have on the environment. A wide range of justified and accurate points are made.	7–8 Marks	Responses include good knowledge and understanding related to food and packaging waste. There is a good balance between analysis and evaluation. Analysis of how consumers can reduce food and packaging waste is good and refers to a range of points from the indicative content. Evaluation makes good judgements and conclusions about the impact that reducing food and packaging waste will have on the environment. A range of justified and accurate points are made.	5–6 Marks	Responses include basic knowledge and understanding related to food and packaging waste. There is an imbalance between analysis and evaluation. Analysis of how consumers can reduce food and packaging waste is basic, with some points made. Evaluation makes basic judgements and conclusions about the impact that reducing food and packaging waste will have on the environment. Some points are made.	3–4 Marks	Responses include limited knowledge and understanding related to food and packaging waste. There may only be analysis or evaluation points presented.	1–2 Marks	8
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	Analysis of how consumers can reduce food and packaging waste is limited or missing. Evaluation makes limited or no judgements and conclusions about the impact that reducing food and packaging waste will have on the environment.	
	No answer worthy of credit	0 Marks

Indicative content

Analyse how consumers can reduce their food and packaging waste.

- Plan meals in advance/prepare a shopping list before going to the supermarket so only food that is required is purchased/avoid impulsive buying.
- Avoid promotional offers, eg buy one get one free that leads to buying more food than needed.
- Check dates of food before purchasing.
- Rotate foods so food is used based on expiry dates.
- Check dates of food at home so it can be used before expiration.
- Avoid throwing foods away that are still useable.
- Keep leftovers to eat for another meal or to use in another dish.
- Batch cook and freeze foods that are coming to the end of their shelf life.
- Cook correct portion sizes so there are no leftovers.
- Use meal delivery services so that quantities of ingredients are limited to portion sizes.
- Grow your own fruit, vegetables and herbs.
- Ensure food is stored correctly to maximise shelf life.
- Use a food waste bin/home composting system.
- Donate unwanted food to food banks.
- Buy loose produce (such as fruit and vegetables), where possible, to reduce packaging waste.
- Look for recyclable or reusable packaging.
- Recycle as much packaging as possible.
- Look for biodegradable packaging.
- Shop with reusable bags.
- Stop or avoid using single-use plastic, eg plastic sandwich bags, cling film, etc.
- Shop at places where you can fill up your own containers.
- Reuse jars and plastic containers.

Evaluate the impact of reducing food and packaging waste on the environment.

- Food waste can create compost for the garden.
- Reducing food waste can save money for families.
- Recycling or reusing packaging will prevent excess household waste, which would otherwise end up in landfill.
- Reducing food and packaging reduces the need for new landfill sites/deforestation.
- Reducing food and packaging waste can help maintain/improve biodiversity.

		• Reducing food and packaging waste can assist in saving animal habitats on land and at sea. • Reducing food and packaging waste reduces impact on the environment, which can lead to global warming/climate change. • Reducing food and food packaging waste can reduce carbon footprint/greenhouse gases being released into the atmosphere. • Reducing food and packaging waste can help save energy/economise on water and natural resources required to produce food and packaging materials. • If children see adults being responsible for food and packaging waste, they can mirror their behaviours and actions. • Reducing food and packaging waste helps sustain the environment for future generations. Any other relevant and correct response can be credited.	
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Qu	Part	Marking guidance	Total marks
05	1	Explain the formation and function of gluten when making bread. Marking guidance Award 1 mark per valid point or 2 marks for each point that is clearly explained. This question is assessed against AO2. <u>Indicative content</u> • Gluten is found in flour. • Strong bread flour should be used due to its higher gluten content. • Flour contains protein/gliadin and glutenin. • When water is added to the flour, gliadin and glutenin form gluten. • Salt helps to strengthen the gluten. • The kneading process helps to develop the gluten further. • Kneading helps the gluten strands become longer and stronger. • Gluten gives the dough elasticity and makes it stretchy. • Gluten gives the dough plasticity, enabling it to be stretched and shaped. • If too much gluten is formed, the dough can become tough. • The formation of gluten helps to trap air bubbles, which makes the dough rise/gives dough a lighter texture. • Gluten coagulates when cooked, which stabilises/sets the structure of the risen bread. Any other relevant and correct response can be credited.	4

Qu	Part	Marking guidance	Total marks						
05	2	A bread recipe is being used to make dough balls. A number of problems have occurred. Complete the table to identify two reasons for each problem. Do not repeat your answers. Marking guidance Award 1 mark per valid point or 2 marks for a point with an explanation. This question is assessed against AO2. Answers should not be repeated. <u>Indicative content</u> <table><tr><th>Problem</th><th>Reasons for problem</th></tr><tr><td>Dough balls are too sticky.</td><td> • Too little flour. • Too much water/liquid. • Incorrect proportions/ratios of ingredients. • Water has not been added gradually. • Wet hands/surface during kneading. • Flour has not been added to the work surface for kneading. • Not kneaded for long enough to aid absorption of excess moisture. • Do not credit reference to the dough balls being undercooked. </td></tr><tr><td>Dough balls have not risen.</td><td> • Yeast/raising agent has not been added. • Not enough yeast/raising agent has been added. • Yeast/raising agent has expired. • Hot water has been used, which has killed the yeast. • Salt in close contact with yeast, which has killed the yeast/too much salt, which has killed the yeast. • Proving temperature too high, which has killed the yeast. • Insufficient proving time. • Insufficient kneading. • Incorrect proportions of ingredients, eg not enough liquid. • Incorrect flour used to trap carbon dioxide/strong bread flour not used. • Insufficient cooking time. • Incorrect oven temperature. • Oven opened during cooking. </td></tr></table>	Problem	Reasons for problem	Dough balls are too sticky.	• Too little flour. • Too much water/liquid. • Incorrect proportions/ratios of ingredients. • Water has not been added gradually. • Wet hands/surface during kneading. • Flour has not been added to the work surface for kneading. • Not kneaded for long enough to aid absorption of excess moisture. • Do not credit reference to the dough balls being undercooked.	Dough balls have not risen.	• Yeast/raising agent has not been added. • Not enough yeast/raising agent has been added. • Yeast/raising agent has expired. • Hot water has been used, which has killed the yeast. • Salt in close contact with yeast, which has killed the yeast/too much salt, which has killed the yeast. • Proving temperature too high, which has killed the yeast. • Insufficient proving time. • Insufficient kneading. • Incorrect proportions of ingredients, eg not enough liquid. • Incorrect flour used to trap carbon dioxide/strong bread flour not used. • Insufficient cooking time. • Incorrect oven temperature. • Oven opened during cooking.	6
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		Dough balls have a dense texture. • Insufficient kneading. • Dough has been over handled/overworked/over-kneaded. • Dough overworked in a food mixer. • Incorrect proportions of ingredients, eg too much flour, not enough yeast, etc. • Insufficient proving time. • Insufficient cooking time. • Oven opened during cooking, impacting rise. • Strong bread flour not used. • Too much flour used during kneading. Any other relevant and correct response can be credited.	
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Qu	Part	Marking guidance	Total marks
05	3	Using the recipe, explain the process of emulsification when making mayonnaise. Diagrams may be used in your answer. Marking guidance Award 1 mark per valid point. This question is assessed against AO2. <u>Indicative content</u> • Oil and vinegar are immiscible liquids/cannot combine. • As the oil is added to the egg yolk, the mixture must be mixed vigorously to form a fat-in-water emulsion. • As the oil is whisked into the egg yolk the mixture thickens to give a smooth and creamy consistency. • The lecithin in the egg yolk stabilises the mixture/stops it from separating. • Lecithin/egg yolk is an emulsifier. Credit ‘egg’. • Emulsifiers are molecules that have a hydrophilic end and a hydrophobic end. • The hydrophobic end is attracted to the oil and the hydrophilic end is attracted to the vinegar. • If oil is added too quickly, or if there is insufficient whisking, the ingredients won’t combine to form an emulsion. Credit reference to constant whisking. • Vinegar is added to help the emulsion form properly. • Vinegar prevents the oil splitting from the egg. • Vinegar also acts as a preservative. • Addition of mustard can aid emulsification. Any other relevant and correct response can be credited.	4

Qu	Part	Marking guidance	Total marks
06	1	Identify two ingredients that would display a use-by date. Marking guidance Award 1 mark per valid point. This question is assessed against AO1(b). <u>Indicative content</u> • Cooked chicken • Grated cheese • Sour cream	2

Qu	Part	Marking guidance	Total marks
06	2	Give four personal hygiene rules that should be followed when preparing a chicken wrap. Marking guidance Award 1 mark per valid point. This question is assessed against AO1(a). Do not credit ‘wash/clean hands’. Candidates must specify what should be used to wash hands, or they must be specific about when hands should be washed, as stipulated in the indicative content. Do not credit reference to washing hands ‘at the start/end/throughout’ unless further validation is given. Do not credit ‘wear an apron’. Must state ‘clean’. Do not credit ‘cover cuts’ or ‘cover cuts with a plaster’. Candidates must specify ‘blue plaster’. Do not credit responses linked to perfumes/strong perfumes. Perfume can impact food quality rather than personal hygiene. <u>Indicative content</u> • Wash hands using warm water and antibacterial soap. Accept soap/soap and water. • Wash hands after visiting the toilet/coughing/sneezing/touching your face/blowing your nose/handling raw chicken, etc. • Tie hair up/wear a hair net. • Wear a beard net. • No jewellery/remove jewellery. • Cover cuts with a blue plaster/blue waterproof plaster. • Wear clean chef whites/a clean apron.	4

		• Good personal hygiene, eg shower regularly. • Make sure nails are short/cut. • No nail varnish/false nails. • Avoid coughing/sneezing over the food. • Do not work with food if feeling unwell. Any other relevant and correct response can be credited.	
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Qu	Part	Marking guidance	Total marks
06	3	The chicken wrap was left in a warm room for four hours. Explain how this could lead to food poisoning. Marking guidance Award 1 mark per valid point or 2 marks for each point that is clearly explained. This question is assessed against AO2. Do not credit reference to food poisoning symptoms. <u>Indicative content</u> • Bacteria will grow rapidly in the danger zone of 5 to 63 °C. • 37 °C is the optimum temperature for bacteria growth. • The chicken wrap would be a high-risk food. • Bacteria need warmth, food/nutrients, moisture and time to grow, all of which are present. • The chicken wrap should have been stored in a refrigerator at 0 to below 5 °C if not being eaten immediately. • The chicken wrap should have been refrigerated within two hours of being made to limit bacteria growth. • Refrigerating the chicken wrap would have slowed the growth/reproduction rate of the bacteria. • Campylobacter/salmonella/clostridium perfringens could be present because of the chicken. • More bacteria would be present if the chicken is undercooked, further accelerating bacterial growth in the four hour time period. • Staphylococcus aureus/e-coli bacteria could be present due to poor personal hygiene practices when the chicken wrap was made. • Listeria bacteria could be present if the grated cheese or sour cream were made using unpasteurised milk. • If bacteria divide and multiply every 20 minutes, there will be a high quantity of bacteria after four hours. • After four hours, there might be no noticeable signs that the food is unsafe to eat. • When consumed, the chicken wrap would contain a high level of bacteria due to the chicken, cheese and sour cream, causing food poisoning.	4

		• Cross contamination could occur when the food is left out if it is uncovered, eg from flies or insects. • The chicken wrap should have been covered/stored in an airtight container to prevent cross-contamination. Any other relevant and correct responses can be credited.	
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